Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	Delta States
State	Louisiana
Discipline Group	Agricultural Engineering
Practice Code/Name	374 - Farmstead Energy Improvement
Scenario ID	12
Scenario Name	Motor Upgrade > 1 and < 10 HP
Scenario Description	The typical scenario consists of replacing an existing electric motor used to drive a ventilation fan, irrigation pumps, vacuum pump, or similar equipment involved with agricultural production with a new, high efficiency motor. The motor size is larger than 1 and less than 10 horsepower.
Before Practice Situation	The system is inefficient with a standard efficiency motor.
After Practice Situation	An on-farm energy audit has determined that energy use can be reduced through use of a NEMA premium motor. Associated practices/activities may include: 122-AgEMP - HQ, and other activities within 374-Farmstead Energy Improvement. The resource concern is inefficient use of energy in the farm operation which increases dependence on non-renewable energy sources and can be addressed through improved energy efficiency. Any improvements are based on a Type 2 energy audit meeting the requirements of ASABE S612.
Scenario Feature Measure	Nameplate horsepower of motor
Scenario Unit	Horse Power
Scenario Typical Size	5

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	$777.25	$155.45
Equipment/Installation	$0.00	$0.00
Labor	$107.28	$21.46
Mobilization	$0.00	$0.00
Acquisition of Technical Knowledge	$0.00	$0.00
Foregone Income	$0.00	$0.00
Total	$884.53	$176.91

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price ($/unit)	Quantity	Cost
Materials	1171	Motor, electric, NEMA Premium, 5 HP	Premium NEMA approved electric motor, 5 Horsepower and all required appurtenances. Materials only.	Each	$777.25	1	$777.25
Labor	230	Skilled Labor	Labor requiring a high level skill set: Includes carpenters, welders, electricians, conservation professionals involved with data collection, monitoring, and or record keeping, etc.	Hour	$26.82	4	$107.28